

NOTES ON THE WORK OF THE BYZANTINE INSTITUTE  
IN ISTANBUL: 1957-1959

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with a Contribution on

THE CONSERVATION OF A BYZANTINE FRESCO DISCOVERED AT ETYEMEZ, ISTANBUL

by

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THE major undertaking of the Byzantine Institute in the past decade has been the restoration of the mosaics and frescoes in the Kariye Camii in Istanbul. This task has now been completed, preliminary reports on the frescoes have been published in earlier volumes of the *Dumbarton Oaks Papers*,<sup>1</sup> and the final publication of the mosaics and the frescoes is now being prepared. The following notes present an account of other projects which have been carried out in recent years, especially during the seasons of 1957 to 1959, in a number of monuments in Istanbul and elsewhere, some of which have been conducted in collaboration with other institutions. Not all of these projects have been completed, but it is felt that a brief report on their progress and illustration of some of the results should be made at this time.

A special report incorporated in these notes concerns the removal and restoration of a fragmentary fresco from a small apse of a Byzantine building which came to light in excavations that were made for the construction of a hospital in the region of Etyemez in Istanbul (*infra*, pp. 219-22). Mr. Majewski, who prepared the report, supervised the removal of the fresco and carried out most of the work of remounting and cleaning. The actual removal of the fresco was done by Mr. Carroll Wales and Mr. Constantine Causis, members of the staff of the Byzantine Institute, who also assisted in its remounting. The painting is now exhibited in one of the rooms at the southern end of the west gallery at Hagia Sophia.

<sup>1</sup> Numbers 9-10 (1956), 11 (1957), 12 (1958), and 13 (1959).

In a separate report, which follows these notes, Mr. David Oates of Trinity College, Cambridge, summarizes the principal results of excavations that were conducted under the auspices of the Byzantine Institute in the Kariye Camii in 1957 and 1958.<sup>2</sup>

In addition to the restorations and excavations at the Kariye Camii the following projects have been carried out, or have been begun, during the seasons from 1957 to 1959. At *Hagia Sophia*: the cleaning and repair of the revetments and *opus sectile* panels on the west wall of the nave from the floor to the level of the gallery; the cleaning and repair of the mosaics, representing great jewelled crosses, in the vault and lunette at the west end of the south side-aisle, and of the revetments and *opus sectile* panels on the wall beneath; the cleaning, in collaboration with the Istituto Centrale del Restauro, Rome, of three of the bronze doors between the two narthexes and the bronze frame and lintel of the great imperial door; the uncovering of the mosaic portrait of the Emperor Alexander (early tenth century) on the eastern face of the northwest pier in the north gallery. At the *Fetiye Camii* (Pammakaristos) the Institute has greatly expanded its work which was begun on a small scale in 1950 with the uncovering of the mosaics in the apse.<sup>3</sup> This work, which is now becoming a major undertaking, involves not only the uncovering of

<sup>2</sup> See *infra*, pp. 223-31.

<sup>3</sup> Brief comments on the early stages of this work were made by the author in an earlier issue of this series of "Notes on the Work of the Byzantine Institute..." *Dumbarton Oaks Papers*, 9-10 (1956), p. 298f., and fig. 113.

all the surviving mosaics but also the restoration of the structure as nearly as possible to its original form. This will include the rebuilding of certain vaults, the reintroduction of two columns as supports for the dome, the restoration of those windows that had been altered when the building was converted to Moslem use, the consolidation of its substructures and the repair of those parts of its marble decorations that have survived. During the season of 1958 the Institute also cleaned and consolidated the frescoes of the *Martyrium of St. Euphemia*, excavated in 1941-1942 by A. M. Schneider, which had deteriorated greatly since their discovery. In the south church of *Zeyrek Camii* (Pantocrator) work on the *opus sectile* pavement has remained in abeyance since the campaign of 1954. Since then some further consolidation of the floor has been done and intermittent searches for mosaics have been carried out in some of the vaults, thus far with only negative results.

In recent years, during the less active winter months, special undertakings have been made outside of Istanbul. Twice, in January and February of 1957 and 1958, the Institute has collaborated with the German Archaeological Institute of Madrid in cleaning and preserving the fragmentary mosaics of the fourth century which still exist in the dome of the mausoleum at Centcelles, near Taragona. Mr. Ernest Hawkins, Assistant Director of the Byzantine Institute, has directed this work, the results of which will be published by the German Archaeological Institute and are not further discussed in these notes. Another urgent work of preservation, described below (p. 219), involved the sixth-century mosaic of the Transfiguration in the apse of the monastic church of St. Catherine on Mt. Sinai. In January 1959, Mr. Carroll Wales and Mr. Constantine Causis were assigned this task.

#### *Hagia Sophia*

During the season of 1958 members of the staff of the Byzantine Institute cleaned and repaired the marble revetments and the cornice of the western wall of the nave, above and between the group of three central doors that lead to the narthex (fig. 1). The scope of the work included a group of five *opus sectile*

panels above the imperial door and two at either side which together serve to enrich the wall which is otherwise covered with marble slabs, arranged in framed panels, like those that adorn the walls throughout the nave. The following notes describe the *opus sectile* panels and their restoration.

In the center at the top, immediately below the cornice, is a panel<sup>4</sup> which represents an aedicula (fig. 3) surmounted by a dome-like canopy. Like most of the marble slabs that compose the revetments of the church, this panel was framed by a projecting double billet moulding of Proconnesian marble. Within this is the outer border made up of short lengths of a red stone which are from 2 to 2.5 cm. in width and about 6 cm. in depth. This red border is set with its narrow edge flush with the surface of the panel, and because of its great depth, which nearly equals the total thickness of the panel, it forms the outer frame of the panel itself. All other pieces of surface stone that make up the design within this outer frame are very thin (between 3.5 and 6 mm. in thickness) and are set into a very hard adhesive bedding, about 4 cm. thick and of a brown color, which is made of a compound of a resin, or pitch, and what we believe to be marble dust. This bedding is backed by pieces of slate which bring the total thickness of the panel to between 6 and 7 cm.

Within the outer frame, and of equal width, is a surrounding border composed of short lengths (12 cm. or less) of the nearly white stone, in appearance like a dolomite rock, which is used throughout the panel for the delineation of all its elements. A multiple border, between 12.5 and 13 cm. wide, which extends up the sides and across the top, is composed of white stone rectangles bordered by narrow bands of porphyry, about 3 cm. wide. Within the porphyry bands, at each of the corners of the white rectangles, are small porphyry discs set into narrow circlets of white stone. At the top center this multiple border is penetrated by the apex of the can-

<sup>4</sup> Height, 1.50 m., width, 1.215 m. The most accurate record of the panel prior to its cleaning is found in the drawing, made from a tracing by Bayan Cahide Aksel, published by Muzaffer Ramazanoğlu, *Sentiren ve Ayasofyalar Manzumesi* (Istanbul, 1946), fig. 11.

opy of the aedicula. Within the confines of the multiple border everything, except the gems on the crosses, is executed in the white stone and an almost-black marble which generally serves as the background or the shadowed parts of the architecture. The aedicula is drawn with a broken cornice in one point perspective so that the back columns appear within the span of the front columns. The front pair of columns bears Corinthian capitals which are supported on fluted shafts. The shafts of the Ionic columns at the rear are fluted only in the upper two thirds. The columns carry an entablature *en ressaut* which is composed of three principal members. The lower member resembles a dentil course; the upper, a cyma decorated with the egg and dart motif; and between these is a rather wide member of black marble bordered above and below by white.

The canopy is indicated as a kind of ribbed dome by means of eight strips of white stone that curve upward to converge at the top, and by two shorter curved strips in the center. Above the latter is a small equal-armed cross whose arms are formed of isosceles triangles. Within narrow borders at the sides of the canopy stand two birds which face inward toward one another.

Below the cornice two parted curtains, each supported by three rings on a curtain rod, hang suspended between the two Ionic columns at the back. The curtains are knotted in the center and are fringed at the bottom. In the space between the curtains is a large jewelled cross which stands on a trapezoidal base composed of four horizontal bands of dark gray marble separated from one another by narrower bands of white stone. The sides of the base are also outlined in white stone. The cross has flaring arms with serifs at the corners in the form of teardrops. At the center was a large square gem. Each of the two vertical arms had one rectangular and one ovoid gem as well as six small circular ones, while the lateral arms had single rectangular gems surrounded by four small circular ones. Suspended from the two side arms were six pearls.

Figure 2 shows the condition of the panel prior to its restoration. In the course of its cleaning and repair it became evident that efforts had been made to disguise the exist-

ence of the crosses and the two birds. Thus, only the lower arm of the large cross was not removed and it lacked the upper of its two large gems and all but one of its small circular gems. Of the black marbles of the background immediately surrounding the cross, however, only the stones of the upper right quadrant and those across the top had been lost. All of the teardrop serifs except the two belonging to the upper arm were still in situ and are original. The lost areas of the background surrounding the cross had been filled with plaster which was painted black. On removing this plaster, and after cleaning the area of the cross, the original imprints of the stones in their setting became clearly visible, and it was on the basis of these imprints that the cross was restored. The evidence for the colors of the gems derives from the fact that the lower rectangular gem of the lower arm was still in situ and was of green porphyry. One of the circular gems was also extant and consisted of a chip of red stone. It is not certain whether the central square at the crossing of the arms had originally been white or colored, but it has been restored as red on the basis of a parallel with a cross found in work of similar technique in an ornamental panel in the west wall of the south side-aisle (see *infra*). The evidence for the suspended gems, six in all, was also found because the black marble surrounding them was intact and the empty spaces where they belonged were clearly present. These have been filled with white plaster.

In the canopy over the aedicula the four central white ribs and most of the black background between them, including the small cross, are our restorations. Most of the stones in this area had been removed, the area plastered, and the ribs incorrectly painted on the plaster. The plaster here was likewise removed and the evidence of the original details, including the small cross, came to light in the pitch setting bed. Of the two birds whose imprints were found at the sides of the dome, the one at the left is entirely our restoration except for the feet and legs which are original. Of the right-hand bird only the two pieces at the end of the tail are original.

The panel representing the aedicula was made with a flush surface. In contrast, the

two adjoining panels of porphyry (fig. 1),<sup>5</sup> also of *opus sectile* set in a bedding of pitch, were made with borders that stand out in relief. They are placed about 50 cm. lower on the wall so as to permit the verd antique framework of the system of revetments to pass above them and to be interrupted only by the aedicular. In design these panels are framed by geometric borders, about 18 cm. wide, composed of alternating quatrefoils and lozenges which enclose discs of red porphyry, surrounded by two bands of green porphyry, likewise raised in relief, separated by a narrow band of red porphyry. Large parts of the two green bands in the left panel and of the inner band in the right panel had been lost and have been restored in plaster.

Immediately above the door are two *opus sectile* panels which flank a large central slab of verd antique. Each of the two lateral panels<sup>6</sup> depicts four dolphins heraldically arranged in pairs above and below a central disc of red porphyry (fig. 4). The two panels are similar to one another in composition and design although there are distinct differences in width and in some of the details and materials. The backgrounds of both are composed of pieces of pinkish yellow marble irregularly shaped and carefully fitted together. The porphyry disc of the left panel is considerably larger than that of the other.<sup>7</sup> Both discs are bordered, first, by a band of marble (the ancient Dokimion marble?) which today is found in quarries near Afyonkarahissar, in Phrygia. In the left panel this in turn is surrounded by a band of green "porphyry" while its counterpart is bordered by true porphyry. The verticality of the panels is emphasized by narrow bands of green "porphyry" near their sides. The paired dolphins are arranged back to back, so to speak, with their tails in the center and the rest of their bodies curved around the central disc to the sides. The tails are bound together by jewelled bands and between each pair is a vertical element: tridents in the panel to the right, and

in that to the left what seems to be a pointed shaft or harpoon. At each side of the panels, between the heads of the dolphins, are two marine creatures, apparently Cephalopods of some kind, which the dolphins are about to devour.

The bodies of the dolphins in both panels are of green "porphyry" with red porphyry used in the curving parts of the bodies near the tails, but, whereas the thin lines that delineate the bodies and tails in the left panel are made of very narrow pieces of white (dolomite?) rock, most of the equivalent lines in the dolphins of the right panel are executed in nacre (mother-of-pearl). In the latter panel nacre is also used in the outlining of the eyes, the small circular dots grouped around the eyes, the main body of the bands that bind the tails of the fish, and in the diagonal pieces in the shafts of the tridents that indicate their spiral treatment. Whereas very little red (porphyry) is used in the fins marking the gills of the four fish in the right-hand panel, the treatment of the eyes and fins of the left-hand panel is more colorful. Here, the areas surrounding the eyes are inlaid with bright green, the centers of the eyes are bright red, almost vermillion, and the fins behind the eyes are of darker red. The jewels in the bands with which the tails of the fish are bound are variously disposed stones of red and green.

The small marine creatures on which the dolphins are feeding are difficult to identify. They are made of white dolomite rock and are characterized as having heads (or are they bodies?) shaped like hens' eggs from which tentacles extend. With only one exception, the creatures in the left panel have tentacles only behind them, while their equivalents in the right panel possess tentacles both before and behind. Perhaps the representation of squids or young octopi was intended.

The two lower panels flanking the Royal door (fig. 1) are representatives of a group of twenty related ornaments that are placed at scattered points throughout the ground floor. Two others are in corresponding locations on the narthex side of the wall. The remaining sixteen are placed, at similarly low level, on the responds of the great piers in the two side-aisles where they are grouped in four sets of

<sup>5</sup> Left panel, 1.63 m. high, 1.655 m. wide; right panel, 1.65 m. high, 1.56 m. wide.

<sup>6</sup> Left panel, ca. 1.30 m. wide, ca. 2.05 m. high; right panel ca. 1.21 m. wide, ca. 2.05 m. high.

<sup>7</sup> They measure respectively about .78 and .67 m. in diameter and are very nearly circular.



four. The two here illustrated (fig. 1)<sup>8</sup> consist of large ovoid shaped slabs of green "porphyry" in the center surrounded by scroll patterns in relief, also of green "porphyry," set against a background of red porphyry sunk to the same level as the central slab. The technique of their manufacture is similar to that of the other *opus sectile* panels described above.

In the seasons of 1958 and 1959 members of the staff of the Institute were at work cleaning and repairing the vast areas of mosaic in the western tympanum<sup>9</sup> of the west bay of the south side-aisle, and in the great arch that frames it (fig. 5). In these vast spaces of gold mosaic ground are four huge jewelled crosses, one of which occupies the center of the tympanum. Another cross was placed in the summit of the arch, oriented east and west with its top toward the east, while the others, which run north and south, are in the two haunches of the same arch. The presence of all four of these crosses had been in good part concealed by overpainting and by the application of stencilled ornaments, placed there, no doubt, by the Fossati brothers about a century ago. Thus, the cross in the summit of the arch was covered by an ornamental medallion which imitated, in general, the motifs that occur in the centers of the cross vaults of the narthex<sup>10</sup> and elsewhere in the building, while the other crosses were obscured by the curiously shaped motifs found in the mosaics of the webs of the cross vaults.

The gold background of the tympanum, devoid of any silver tesserae, was laid in horizontal rows in which the tesserae were tilted at an angle, to face downward, as was usually the case in the backgrounds of the pre-iconoclastic mosaics on vertical surfaces

in Hagia Sophia, and often elsewhere as well. The great cross in the lunette<sup>11</sup> is outlined by a jewelled border which varies in width from 7 to 8 cm. Within the border outline, the field of the arms of the cross is, like the background of the lunette, filled by horizontal rows of tilted gold cubes. The borders are executed in blue glasses and the gems that are set into it at regular intervals are outlined in gold. Elliptical and rectangular gems alternate; the former are of dark red glasses and the latter of green. Between the gems there were originally "St. Andrew's" crosses of silver tesserae, i. e., four small squares, set some distance apart, which form a square, and another similar square in the center. Most of these are now missing from the cross in the lunette, but they were like those that still exist in the cross at the summit of the arch. The corners of the arms are marked by tear-drop serifs which shade from blue around the edges to green within.

Unlike the ground of the lunette, the gold background in the soffit of the arch is laid with tesserae parallel to the surface of the arch. This does not indicate a different epoch, for we have yet to discover the use of tilted cubes on any but vertical surfaces of the walls—never in an arch or vault. The cross at the top of the arch (fig. 6)<sup>12</sup> is, in every respect except size, like the one in the lunette. The two largest crosses are in the haunches of the arch. They are outlined with borders of red glass in which diamond shaped ornaments of silver with small square projections at the centers of each side are spaced at regular intervals. Within each of these is a diamond shaped center of green. Alternating with the diamonds is an X shaped ornament with blue or green knobs, tipped with silver, at the ends of the strokes.

The west wall of the south side-aisle, beneath the lunette and arch whose mosaics have been described above, is covered with revetments and is penetrated by three doors that lead to the narthex. Above the two southernmost doors, which are placed equi-

<sup>8</sup> Ca. 1.52 m. in width and ca. 2.20 m. in height.

<sup>9</sup> The width of the tympanum at cornice level, and hence the span of the arch before it, measures 9.40 m. The height of the tympanum is 4.00 m. and the depth of the soffit of the arch is 4.70 m.

<sup>10</sup> See, for example, T. Whittemore, *The Mosaics of Hagia Sophia*, I (Oxford, 1933), pl. 4. The multiple-armed cross that appears in the center of each of the mosaic medallions was omitted in the stencil.

<sup>11</sup> It stands 3.11 m. in height with a spread of the horizontal arms of 2.08 m. The width of its vertical arm, near its base, is .36 m. and that of its horizontal arms is about .34 m.

<sup>12</sup> It measures about 3.58 m. in height.

distant from the axis of the aisle, are two panels of *opus sectile* (fig. 5),<sup>13</sup> each of which consists of two slabs of porphyry surrounded and separated by very richly ornamented borders between 27 and 28.5 cm. in width which are of particularly fine design and workmanship (figs. 7, 8). Of the two panels, the following description and illustrations concern the southern, or left, one. The two porphyry slabs, which are framed by the ornaments here described, are of equal height but the left slab is considerably narrower than the right,<sup>14</sup> thus making the panel distinctly unsymmetrical. Its northern pendant, however, reverses the dissymmetry by placing the narrower of its slabs of porphyry to the right.<sup>15</sup>

The rich border is mainly composed of vine scrolls that issue from fluted amphorae (fig. 7). The vases are placed in the lower border at the base of each of the three vertical borders so that the scrolls rise at the sides of the porphyry slabs. Crosses within circular borders (fig. 8) are placed on the centers above and below the porphyry slabs, while here and there, in the midst of the vine scrolls, are other smaller crosses.

The technique, materials, and motifs bear a close relationship to extensive *opus sectile* ornaments that occur elsewhere in the nave of Hagia Sophia, for example, in the spandrels and above the arches of the colonnade at gallery level, where the vine scrolls are very similar, and in the frieze below the upper cornice in the arch of the bema, where the amphorae recur.<sup>16</sup> The technique of their manufacture is like that described above with regard to the aedicula panel.<sup>17</sup> The positive elements of the design are mostly of the white, mat, dolomite rock. There are, however, numerous accents of a bright red stone,

for example, in the narrow outermost border,<sup>18</sup> in the central squares of the crosses, at the centers of some of the blossoms, and in the small triangular space fillers between the white cusps of the frames surrounding the larger crosses. The background is of various dark stones approaching black. In the flutes and in the openings of the necks of the amphorae the stone is a very fine grained black marble with yellowish gray mottling that is particularly beautiful. Some of the background stones are almost jet black, others, a very deep mottled red. Throughout this ornament one is struck by the beauty of line, the great accuracy of the cutting, and the highly polished level surface that was achieved.

One of the projects in which the Byzantine Institute collaborated fruitfully with other institutions was the cleaning of the three central bronze doors (figs. 9, 10) in Hagia Sophia leading from the outer to the inner narthex, and of the metal frame of the imperial door on the axis between the inner narthex and the nave. The initiative for this enterprise was taken a number of years ago by the Centro di Studi Italiani in Turkey through the good offices of Professor Paolo Verzone of the University of Turin and Italian diplomatic officers. In the autumn of 1957 technical experiments were performed by members of the staff of the Istituto Centrale del Restauro, of Rome, but it was not until one year later that the work of cleaning was begun as a joint undertaking of the Department of Museums and Antiquities of the Turkish Republic, the Istituto Centrale del Restauro, and the Byzantine Institute. While costs were shared by the latter institutions, the technical work was directed by Carlo Bertelli of the Istituto Centrale del Restauro with A. Cavallari and E. Zorzetto as his assistants.<sup>19</sup> The

<sup>13</sup> The southernmost one of the two measures 1.59 m. in height and 2.02 m. in breadth.

<sup>14</sup> Their respective widths are 49 and 65 cm.

<sup>15</sup> In corresponding positions at the west end of the other side-aisle, to the north of the church, there were similar panels, the southernmost of which is relatively well preserved and displays the same dissymmetry. The northernmost of the two is largely a painted imitation (possibly a restoration of the Fossatis) which has, however, been made completely symmetrical.

<sup>16</sup> In the latter place, however, the motifs are executed in relief.

<sup>17</sup> P. 206.

<sup>18</sup> This is actually a frame that penetrates the full thickness (6 cm.) of the panel as a whole and corresponds to the outer frame surrounding the aedicula panel (see *supra*, p. 206).

<sup>19</sup> A preliminary report on the results of the campaign of 1958 was published by C. Bertelli, "Notizia preliminare sul restauro di alcune porte di S. Sophia a Istanbul," *Bollettino dell' Istituto Centrale del Restauro*, 34-35 (1958), pp. 95-106, with appendices by Bertelli (pp. 106-111) and S. Liberti (pp. 112-115). An earlier statement

Byzantine Institute also provided the scaffoldings, technical assistance, and all photography.

The three central doors between the two narthexes are constructed of plates of brass<sup>20</sup> applied over the exterior sides of their wooden core. Each door consists of two leaves, and each leaf is composed of two recessed panels<sup>21</sup> which are framed by heavy rails and stiles after the manner of wooden doors. The two lateral doors are mates (the southern one of the pair is illustrated in figure 9) and were originally almost identical in design and detail, but strikingly different from the larger central door (fig. 10). Attached by pins to the center of each of the panels of the side doors was a relief ornament consisting of a vase from which there issued a trumpet motif, with leaves and vine tendrils at its base, which in turn gave rise to a cross with widely spread acanthus leaves at each side of its base. The ornaments of the lower panels, in their entirety, and the crosses in the upper panels are lost, but the cleaning has revealed distinct traces from which the outlines of the missing parts can be accurately reconstructed. It is clearly evident that the crosses had flaring arms and that at the end of each arm there was a circular disc. In the upper panels the lower disc of each cross is still preserved in situ. The lost ornaments of the lower panels were very much like those of the upper, but their vases, judging from their traces, were considerably larger and taller although of the same type. It is worth noting that the vases of the upper panels very nearly repeat the forms of the vases in the *opus sectile* panels above the west doors of the south side-aisle

(fig. 7) and those in the upper frieze of the arch of the bema. Narrow copper ornaments were inlaid in the stiles and rails at the corners of the panels and again at points corresponding to the centers of the sides. Depending upon their position, their shapes resemble the *gamma*, the *tau*, and the *iota*. They were embellished with rows of alternating, sunken, squares and circles which must once have been filled with colored materials.

The two leaves of the larger central door (fig. 10) were given wider central rails, composed of two plates whose horizontal joints were covered by applied strips of brass with flaring ends similar to the terminations of the arms of crosses. In addition a comparable strip, or batten, now lost, appears to have been attached along the right edge of the left leaf and thus served to cover the vertical joint between the two leaves when they were tightly closed. The evidence for this batten exists in the series of holes near the edge of the stile of the left leaf which must represent points of attachment.

As in the side doors, the principal elements of the design in the central door were the crosses in its four panels. The horizontal arms of all four are lost, but their traces are clearly preserved on the surface from which they had been removed. In the upper panels the crosses are framed by semicircular arches supported on columns whose shafts have strips of copper diagonally inlaid in the brass, in imitation of spiral fluting. The columns bear Corinthian capitals of exquisite workmanship and form (fig. 11). On the innermost bands of the arches oval bosses, resembling studs, are closely spaced. These are worthy of note in connection with the similar treatment of the frame of the imperial door (see *infra*). The lower panels are much more austere, for the crosses are enclosed within frames that form steeply pitched gables whose supports, now lost, were doubtless similar in design to the members that form the gables. The lower crosses are distinguished by a representation of the hill of Golgotha from which flow the four rivers of Paradise. The stiles and rails are more elaborately ornamented than those of the side doors. First of all, the covering battens were ornamented with interlaced medallions in which plant and leaf forms with animals, both lambs and waterfowl, were interspersed

on the results of the experiments of 1957 were published by Licia Borrelli Vlad, *ibid.*, 31-32 (1957), pp. 182-187.

<sup>20</sup> While commonly assumed to be bronze, analysis has shown the metal to be brass (Bertelli, *op. cit.*, p. 102).

<sup>21</sup> Central door: each leaf, excluding rebates at top and bottom, 5.15 m. high, 1.64 m. wide; upper panels, within mouldings, 1.84 m. high, 1.13 m. wide; lower panels, 2.53 m. high, 1.13 m. wide. North door: each leaf, excluding rebates, 4.04 m. high, *ca.* 1.31 m. wide; upper panels, 1.715 m. high, .93 m. wide; lower panels, 2.01 m. high, .93 m. wide. South door: each leaf, excluding rebates, 3.95 m. high, 1.31 m. wide; upper panels, 1.65 m. high, .98 m. wide; lower panels, 1.99 m. high, .98 m. wide.

at regular intervals (fig. 12). The larger terminal medallions contained nimbed lambs in attitudes of *proskynesis*. Running the lengths of the stiles and rails and spaced at close intervals were concave ovals, smoothly hollowed out, with rosettes flanking each interval. In the rails and stiles, at the corners of each of the panels, and again at points corresponding to the center of each side, were large circular ornaments, partly indented and partly raised in relief, each surrounded by four ivy leaves.

The metal leaves of the imperial door (which leads from the inner narthex to the nave on the axis of the church) no longer exist, but the brass frame<sup>22</sup> which imitates, in its forms, the marble frames commonly used in the doors of the church, is still in situ and has also been cleaned (fig. 13). On the narthex side, the surfaces of the frame, with the exceptions of the inner and outer mouldings, are unadorned. On the narrow inner moulding the decoration consists of vine tendrils with leaves resembling those of the ivy, while on the outer border one finds a series of closely spaced oval bosses, like halved eggs, which bear a close relationship to the same motif on the arches in the upper panels of the central door of the outer narthex. They also appear to be the counterparts, in relief, of the concave ovals on the stiles and rails of the same door. Metal hooks, which imitate the form of human fingers, are placed at intervals along the upper frame on the wide convex moulding which forms the principal member of the frame.

While the metal frame itself imitates the architectural forms of marble mouldings, the great metal lintel, or cornice, above it resembles a simple trough with splayed sides reinforced by narrow flanges along the top and bottom edges. The latter, too, are ornamented by closely spaced oval bosses reminiscent of those observed on the frame below and on the central door of the outer narthex. These bosses, however, are sharply pointed on one end. Placed at the center of the splayed face of the lintel, and attached to it by four round headed pins, is an arch resting upon two very short colonnettes with panelled shafts. The

face of the arch is unmoulded and has two ill-defined flat ridges around its inner and outer edges. Each capital has three rather schematized vertical leaves, a fillet above in lieu of an abacus, and an astragal below. The bases are flat, unmoulded, and in two steps. The arch, it should be noted, does not fit properly in its place, for it overlaps the flanges at top and bottom and is placed laterally in awkward relationship to the bosses. A short distance to right and left of the arch, near the upper flange, are two holes in the plates of the lintel which indicate that ornaments of some kind had been attached there. Around the hole at the right side the trace of those ornaments is visible in the form of a circle left upon the surface, yet the arch itself appears to be complete. It is difficult to imagine at those points any circular ornaments that could properly belong to the arch as it now exists. The following considerations, then, would seem to suggest that the arch and the relief ornament within, which is an integral part of the arch, are not original to the composition of the lintel: the eccentric character and treatment of the arch, the awkward relation of the arch motif to the main structure of the lintel, and the evidence of the elements that had been removed when the arch was applied to the lintel.

Within the arch there is represented a throne with a round back on which is an open, inscribed book toward which a dove descends with outspread wings. The inscription is based upon the text of *John*, 10, parts of verses 7 and 9. Transcribed, it reads: Εἶπεν ὁ Κ(ύριος) | ἐγὼ εἰμι | ἡ θύρα τῶν | προβάτων | ... δι' ἐμοῦ | ἂν τις | εἰσέλθῃ | ... εἰσελεύσεται(αι) | κ(αί) ἐξελεύσεται(αι) | κ(αί) νομήν | εὐρήσει.<sup>23</sup> There has been some discussion in previous literature concerning this inscription in which its Justinianic date has been questioned on epigraphical grounds.<sup>24</sup> The new evidence

<sup>23</sup> "The Lord said, I am the door of the sheep... by me if any man enter in... he shall go in and out and find pasture."

<sup>24</sup> C. G. Curtis and S. Aristarches ('Ελληνικός Φιλολογικός Σύλλογος, Παράρτημα, XVI [1885], p. 34) thought the *delta* betrayed a date in the tenth century and they suggested that the inscription is a restoration of 981 executed after the destructive earthquake of 975. (The reference must be to the earthquake of 989; none occurred in 975). Antoniades (*op. cit.*, p. 177), viewed the

<sup>22</sup> An approximately scaled drawing of the frame, on its narthex side, can be found in Antoniades, 'Εκφρασις τῆς 'Αγίας Σοφίας, I (Athens, 1907), p. 176, fig. 200.

which resulted from the cleaning of the metal would tend to support the view that the inscription is post-Justinianic. On the other hand, the frame itself, including the lintel, presents no features that would suggest that it was not contemporaneous with the three doors of the outer narthex, and these, in turn, can well be viewed as contemporaneous with the main ornamental program of the church and should be considered to be the original doors of Justinian's church.

One of the most gratifying events in the work of the Byzantine Institute in recent years was the discovery, in the autumn of 1958, of the mosaic portrait of the Emperor Alexander (A.D. 912-913). Like most of the mosaics that were still extant in Hagia Sophia at the time of the general renovations carried out between 1847 and 1849, this mosaic had been seen and sketched by the Fosatti brothers and its existence, therefore, was known to Thomas Whittemore who published the water color drawing in his report on the other mosaic portraits of imperial personages that were found in the south gallery.<sup>25</sup> The portrait, however, eluded all efforts made toward its discovery, and Whittemore reluctantly concluded that it must have been among the numerous mosaics that had perished after 1849. There the matter rested until, in August of 1958, the original sketch was seen again by Robert Van Nice when, in connection with his studies on the structure of Hagia Sophia, he examined the papers of the Fosattis that had been deposited in the archives of Bellinzona in the Swiss canton of Ticino. In the right-hand margin of the sheet on which the sketch was made, and therefore not included in the area of the published photograph, were faint notations giving precise information as to the position of the mosaic in the building. An examination of the specified place was made and the mosaic was found (fig. 14). It is situated in the north gallery, far removed from the other imperial portraits, where it occupies the narrow arched

wall surface that forms the western vertical termination of the tunnel vault that runs behind, and parallel to, the series of seven arches of the gallery colonnade between the great northern piers. In other words, it was placed upon the eastern face of the north-western pier and adjoins the pier-respond of the colonnade. In elevation, the bottom of the mosaic rests upon the plaster string course (decorated with a running motif of leaves) at a height of 5.64 m. from the floor. The mosaic treatment of the wall is preserved to a height of 3.08 m. above the string course, and above this point, which roughly corresponds to the top of the pier-respond, the wall surface widens on the left, or south, to a total width of 1.94. The average width of the panel, between the string course and the top of the respond, the area within which the portrait is found, measures 1.60 m. The soffit of the tunnel vault rises 1.66 m. above the preserved area of mosaic, and in this area which was covered with plaster all trace of mosaic is lost. The mosaic of the portrait and the plaster on the wall above it were covered by a painted pattern that imitated the mosaic pattern with which the soffit of the tunnel vault was decorated: i. e., a pattern of vertical and horizontal rows of crudely shaped circles and lozenges in alternation. Because the pattern had the actual appearance and texture of mosaic, the presence of a figure mosaic was very cleverly concealed, and it was only on very close inspection and by an examination of the directions of the rows of painted tesserae that one became aware that a figure lay hidden beneath the paint. These conditions, together with the relatively high altitude of the mosaic above the floor, the dimness of the light under the vault, and its most unlikely position in the architecture of the gallery, help to explain how the mosaic eluded the searches that were made for it. Moreover, all other figure mosaics in Hagia Sophia, with the exception of the lunette above the imperial door, had been obscured by coatings of plaster and the search for the Alexander portrait was conducted mainly in plastered areas. The only plaster that was used in obscuring the figure of Alexander was a thin coating that the Fosatti brothers had laid over the head of the Emperor.

The work of cleaning the mosaic began in April of 1959 and before the end of the year

*alphas* rather than the *delta* as evidence that the inscription was not Justinianic, but he offered no suggestion for its date.

<sup>25</sup> T. Whittemore, *The Mosaics of Hagia Sophia at Istanbul*, Third Preliminary Report (Oxford, 1942), pl. 37 and p. 8.

its restoration will be completed.<sup>26</sup> The illustration published here (fig. 14) shows the upper part of the figure, cleaned and repaired, but with plaster repairs untouched as yet with various values of gray, and the lower part of the figure still obscured by the painted pattern. Beneath this covering the figure is preserved in its entirety.

The Emperor stands frontally posed and attired in imperial vestments. In his right hand is the *akakia* (see *infra*), held vertically before him. The orb is in his left hand which is extended to the far right side of the panel. He wears the imperial crown, of the *camel-aucum* type,<sup>27</sup> from which hang double *perpendulia* at each side. Almost obscuring his other vestments is a very long *loros*, or scarf, heavily studded with gems and pearls, which is wound about the body. One end of the *loros* hangs down the front, almost to the feet, and the other is draped over the Emperor's left arm from which it hangs free. The *akakia*,<sup>28</sup> or *anexikakia* as it was also called, is depicted as a cylindrical object with rounded ends. The cylindrical part is of red glass tesserae; the rounded ends of gold. The Book of Ceremonies informs us that the *akakia* was carried by the emperor in his right hand when he went in ceremonial procession on Easter Sunday from the Triclinos of the Nineteen Akoubita in the

Great Palace to the mitatorion of Hagia Sophia.<sup>29</sup> On that occasion the emperor also put on the *loros* which, as we have seen, he wears in the mosaic. The *akakia* is described by Codinus<sup>30</sup> as a purple (red) silk handkerchief, imitating a manuscript in form, which was filled with earth to signify that the emperor should be humble because he was mortal. Du Cange defines the *akakia*<sup>31</sup> as a red cloth bag in the form of a volumen. Judging from its representation in the mosaic, which is the most detailed representation of the object known to me, the little cylindrical bag that was filled with earth was golden in color and around it a red handkerchief was neatly wrapped. An explanation of the symbolism of the *loros* and the *anexikakia* is set down for us by the compiler of the Book of Ceremonies who devotes the fortieth chapter of Book II to the subject.<sup>32</sup> The *loros*, it is said, recalls the windingsheet and symbolizes the death and resurrection of Christ. When carried in procession by the *magistri* and the *patricii* in the procession of Easter, the *anexikakia* symbolizes the life-giving scriptures of the New Testament borne by the apostles. Thus the text of the Book of Ceremonies also makes it clear that the *anexikakia*, although not a volumen, resembled one in form, as we have seen from its representation in the mosaic and from the testimony of Codinus.

On each side of the Emperor are two medallions containing inscriptions. The name of the Emperor is recorded in three lines in the medallion at the upper right, but the inscriptions in the other three are in the form of cruciform monograms.<sup>33</sup> The three monograms should be read in the following order: upper left, lower left, and lower right, for the three are continuous and compose a prayer. In that order they read: Κύριε βοήθει (τῷ σῷ) δούλῳ | ὀρθοδόξῳ | πιστῷ δεσπότη<sup>34</sup> an expression

<sup>26</sup> The following description is necessarily incomplete. The portrait will be a subject of later study and publication.

<sup>27</sup> It appears to be essentially the same type (i.e. with a closed, dome-like top and jewelled diadem) that is worn by the Emperors Constantine IX and John II in their portraits in Hagia Sophia (Whittemore, *op. cit.*, pls. 10 and 26) as well as the crown of Frederick II of Sicily in the Cathedral Treasury at Palermo which was found in the tomb of the Empress Constance (d. 1222). For illustration of the latter see J. Deér, *The Dynastic Porphyry Tombs of the Norman Period in Sicily*, *Dumbarton Oaks Studies*, V (Cambridge, Mass., 1959), fig. 210. See also his discussions on the type of the *camel-aucum*. The principal difference between these crowns and that of Alexander is that the dome of the latter is much lower and must have fitted snugly on the top of the head.

<sup>28</sup> I am greatly indebted to my colleague Mr. Cyril Mango for his suggestions regarding the identification of this object. See the comments on the *akakia* in J. D. Breckenridge, *The Numismatic Iconography of Justinian II*, *Numismatic Notes and Monographs*, no. 144 (New York, 1959), p. 36.

<sup>29</sup> *De Cer.*, I, 37 (Bonn ed.), p. 187.

<sup>30</sup> *De Officialibus*, VI (Bonn ed.), p. 51. He appears to be mistaken when he says that the emperor carried it in his left hand.

<sup>31</sup> *Glossarium ad scriptores mediae et infimae graecitatis*, s. v. 'Ακακία.

<sup>32</sup> *Op. cit.*, p. 637ff.

<sup>33</sup> I wish to thank two of my colleagues, Mr. Cyril Mango and Professor M. V. Anastos, for their assistance in deciphering the monograms.

<sup>34</sup> "Lord help thy servant, the orthodox faithful Emperor."

of piety and humility that is in keeping with the symbolism of the *loros* and the *akakia*.

*Fetiye Camii* (Pammakaristos)

In the summer of 1950 thorough tests were made in the parecclesion of the church of the Theotokos Pammakaristos, now known as the Fetiye Camii, to determine to what extent mosaics still existed beneath the plaster which covered its walls and vaults. As a result, the position of each of the surviving mosaics was established though their subjects remained unknown. The following year work began on a small scale in the apse and bema when the figure of Christ Hyperagathos in the conch of the apse, the dedicatory inscription on the face of the arch, and the figure of the Mother of God in the northern lunette of the bema were uncovered but not completely cleaned or repaired. A brief notice of this work, with one illustration, was published in a previous issue of these Notes.<sup>35</sup> At various times since 1951, when personnel could be spared from other tasks, the cleaning of these mosaics was carried forward, but it was not until 1958 that scaffoldings were set up throughout the chapel and the thorough restoration of the Parecclesion as a whole was begun. The cleaning of the mosaics of the apse and the bema has now been completed and work in the dome, which contains the well-known medallion of Christ Pantocrator and twelve figures of prophets, is well advanced. Plaster has been removed from all surfaces in the nave and on the walls of the narthex wherever mosaics or marble incrustations were missing. Thus, much of the masonry in the chapel has been laid bare and the cornices and decorative frieze, which were also concealed beneath the plaster, have been exposed and the extent and nature of the Turkish alterations to the structure of the building have been revealed, making it possible to plan the restoration of the building according to its original forms.

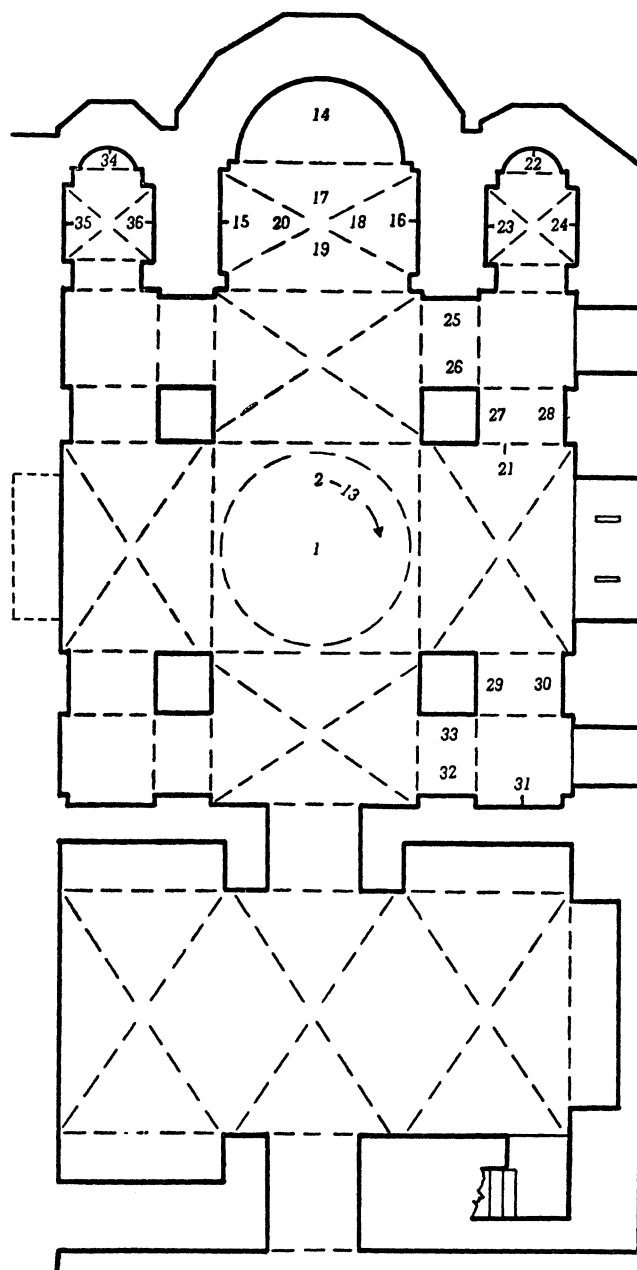
In conjunction with this work the inscriptions of the mosaics that still remain under plaster were sought out and exposed, and the subjects of the figure representations that still exist in the chapel are known even before they have been uncovered. The numbers on

the accompanying diagrammatic plan (text fig. A)<sup>36</sup> indicate the positions of the surviving figures, insofar as they have been discovered at present writing, and the numbers in the legend give their identifications.

On the basis of evidence now revealed, a general, though tentative, picture of the decoration of the interior of the chapel can be drawn. The lower one of its four superimposed zones, that is, the walls from the floor to the first cornice which is at the level of the tops of the four columns, was mainly decorated with marble revetments. This is evident from the distribution of the holes cut into the walls to receive the metal cramps, wedged into the masonry by marble pegs, with which the marble slabs were attached to the walls. There is evidence, however, that two vertical mosaic panels, about .60 m. by 1.60 m. in size, must have been let into the revetments of the south wall of this zone where they were placed in alignment with the two small windows of the second zone. All marble revetments of the lower zone have disappeared. The second zone, which extends to a frieze and cornice (see *infra*) from which spring the vaults that cover the four arms of the nave, combined both marble incrustations and mosaics in its decoration. The mosaics were largely confined to the vaulted surfaces in this zone. Thus, they were placed (see text fig. A) in the conch of the apse; in the groin vault and the two lunettes of the bema; in the soffits of the eight stilted arches that were carried, two each, by the four columns; in the small square domical vaults at the corners of the nave; and in the vaults and lunettes that form the second, or upper, zone of the tiny prothesis and diaconicon. There are, however, indications on the bare masonry of the west wall of the nave, above the door, that a rather square panel of mosaic, doubtless depicting the *Koimesis*, had once existed there in the midst of the incrustations of the wall. All other wall

<sup>35</sup> *Supra*, note 3.

<sup>36</sup> The architectural details are greatly simplified in the plan. The original arrangement of the columns and vaults in the north side of the nave is reconstructed in the drawing. The plan of the nave is taken at the level of the second zone, that is, through the arches that rest on the four columns. The plan of the narthex is taken at floor level and represents a tentative reconstruction of its original arrangement of niches (see *infra*).



A. Fetiye Camii, Sketch Plan of Parecclesion

MOSAICS DISCOVERED PRIOR TO 1959

- |                |                            |                                   |
|----------------|----------------------------|-----------------------------------|
| 1. Pantocrator | 13. Isaiah                 | 25. Gregory Thaumaturgus          |
| 2. Moses       | 14. Christ Hyperagathos    | 26. Gregory of Agrigentum         |
| 3. Jeremiah    | 15. The Virgin             | 27. Antipas                       |
| 4. Zephaniah   | 16. John Prodromos         | 28. Blasius                       |
| 5. Micah       | 17. Archangel Michael      | 29. Sabas                         |
| 6. Joel        | 18. Archangel Raphael      | 30. John Climacus                 |
| 7. Zechariah   | 19. Archangel Gabriel      | 31. Euthemius                     |
| 8. Obadiah     | 20. Archangel Uriel        | 32. Chariton                      |
| 9. Habakkuk    | 21. Baptism of Christ      | 33. Arsenius                      |
| 10. Jonah      | 22. Gregory the Theologian | 34. James, Brother of the Lord    |
| 11. Malachi    | 23. Cyril                  | 35. Clement (?)                   |
| 12. Ezekiel    | 24. Athanasius             | 36. Metrophanes of Constantinople |



surfaces of this zone,<sup>37</sup> including the surrounds of the arches that face into the cruciform space of the nave, were decorated with revetments, some of which still survive, especially in the southeastern part of the nave. The third zone, which consists of the cross vaults over the four arms of the nave, their lunettes, the four pendentives of the dome, and the walls at the ends of the four arms (three of which are penetrated by large windows and one by an arch opening into the "gallery" above the narthex), was decorated entirely in mosaic, as was the fourth zone which consists of the central dome. Of the mosaics of the third zone, only the scene of Christ's Baptism, in the eastern lunette of the south arm, has survived (fig. 15). Other than this, and the mosaics of the dome, all extant mosaics are in the vaults of the second zone.

With the exception of the west wall of the second zone, the only surfaces of walls or vaults in which scenes (as distinguished from individual figures) could be placed are in the third zone—that is, the upper zone of the four arms of the cross. Here, however, the four lunettes at the ends of the arms were so largely filled by their triple windows as to preclude their use for this purpose. The groin vaults will also have to be ruled out, for their warped shapes, especially in vaults of such small dimensions, make them unsuitable, as will be seen in the case of the groin vault over the bema (see *infra*). This leaves the eight rather tall lunettes in the narrow sides of the vaulting bays of the arms as the only places where scenes could be accommodated. We are fortunate that one of these still retains its mosaic—the scene of Christ's Baptism which is now being cleaned and repaired (fig. 15).<sup>38</sup> Thus, in all probability, there were originally not more than nine scenes (one in the second zone and eight in the third zone) among the mosaics of the chapel. As the scene of Baptism suggests, the lunettes probably contained subjects selected from the cycle of the great feasts, another of which—the Koimesis—may well have been in the second zone above the door where it so often occurs in other churches.

<sup>37</sup> With the possible exception of the north wall which was destroyed in Turkish times.

<sup>38</sup> The height of the panel, including its lower border, which is 10 cm. high, measures 1.63 m. from the cornice. Its maximum width is 1.355 m.

In this respect the chapel conforms to the normal iconography of Byzantine church decoration, as it does also in possessing a Pantocrator and Prophets in its dome. One can conjecture further that the Four Evangelists were in the pendentives of the dome. The mosaics of the apse and the bema, however, are rather unusual, for, instead of the more normal use of the Virgin in the apse, we find an enthroned figure of Christ of the unique type of the "Hyperathos," as it is inscribed. The bema, too, is unusual, for where one might expect archangels, the two principal figures are the Virgin in the lunette at the left, and St. John as Prodromos in the lunette at the right. In effect, therefore, we have the composition of the Deesis as the main feature of the iconography of the sanctuary, a subject that occurs only infrequently in this position in church decoration. The archangels are not forgotten, for they appear above in the four segments of the cross vault where, however, they are reduced to busts.

The saints with which every church was decorated appear, at least in the main, to have been placed in the second zone (bishops in the eastern half and other saints in the western); in the soffits of the small arches that rest on the four columns; in the lunettes that respond to those arches; and in the vertical panels under the vaults of the prothesis and diaconicon. In the latter location we find three of the great Church Fathers (Sts. Gregory the Theologian, Cyril, and Athanasius) who usually appear, with others, on the wall of the apse.<sup>39</sup> Where the other great Fathers, such as Basil, Chrysostom, Nicholas, etc., were placed is unknown, but one might have expected to find three of them in the prothesis to the north, where they would have held equal and corresponding positions with those in the diaconicon. This, however, is not the case, for the three figures in the prothesis are St. James the brother of the Lord in the apsidiole, a bishop whose name contained the letters *kappa*, *lambda*, *eta*, in the lunette at the left, and Metrophanes of Constantinople facing him at the right. Although the figure of St. James has not been uncovered, we may expect him, for reasons that will become apparent below, to be attired in the vestments

<sup>39</sup> The apse wall of the chapel was originally covered with marble revetments.

of a bishop and thus represent the founder of the Patriarchate of Jerusalem. Because the figure at the left was never covered with plaster, it is evident from his vestments that he was a bishop. If we interpret the fragmentary inscription that accompanies him as Κλήμης and regard him as St. Clement of Rome, we have the first bishop of Rome, after St. Peter, of whom anything is definitely known. In this special sense, then, he would represent the founding of the See of Rome. Facing him, at the right, is St. Metrophanes of Constantinople who is the first authenticated bishop of Constantinople, appointed during the reign of Constantine the Great. In the context of his companions, therefore, he represents the founding of the Patriarchate of Constantinople.<sup>40</sup>

At present writing, only one of the surviving figures of saints, totaling fifteen in number, has been partly uncovered. Figure 16 illustrates the relation of these small standing figures to the arches in which most of them are placed. When the plaster was stripped from the upper part of the figure of Saint Blasius (no. 28), martyr and bishop of Sebaste, the mosaic surface was found to have been previously obscured by reddish paint. The scale of the figures can be judged from the relatively small span of the arch which measures approximately 1.00 m.

A decorative feature worth noting is the combined frieze and cornice that girds the cruciform perimeter of the nave at the top of the second zone where it marks the transition from the marble incrustations to the mosaics with which the third zone was entirely decorated. The frieze is made of slabs of marble of various lengths, but about 27 cm. high, which rest on a bull nose moulding above the marbles of the incrustations. Above the frieze is a typical fourteenth-century splayed cornice 10 cm. thick. The surface of the frieze is treated in *champlevé* technique with running motifs of vines interspersed at intervals with rampant lions enclosed within medallions (fig. 17). Within some of the units of the vine pattern are single or paired birds shown in

the act of drinking. The backgrounds of the vine patterns and the bodies of the lions and their surrounding borders were cut away and filled with colored pitch. Thus, the backgrounds of the vines were of an almost black pitch while the lions appear to have been of a reddish brown color. When the cornice and frieze were relieved of their heavy coatings of plaster, it was found that the pitch had melted and had run down over the bull nose moulding and onto those fragments of revetments that still exist.<sup>41</sup> The two cornices which made the circuit of the nave immediately above and below the second zone of the revetments are incompletely preserved. On their splayed faces they bore painted inscriptions on their gesso coatings. The inscriptions are now fragmentary, but once they have been cleaned certain sections will become legible and we will then know whether they correspond to the verses of Manuel Philes, which are recorded in his *Carmina*,<sup>42</sup> where it is said that they were placed within the naos.

The verses of Philes on the interior and exterior cornices, and the mosaic inscription around the face of the apse, make it clear that the little church was built by the widow of Michael Glabas Tarchaniotes, the nun Martha, to house the tomb of her famous husband. Evidence has come to light, however, that the chapel was planned to serve also as the place of burial for many people and was probably intended as the mortuary chapel of Tarchaniotes' family or that of his wife, the Philanthropenoi. While one cannot be certain, there is reason to believe that an *arcosolium*, perhaps one of special importance, had been constructed at floor level in the northern wall of the nave, on the transverse axis of the chapel, where extensive alterations have destroyed much of the evidence.<sup>43</sup> The principal place for burials, however, was the narthex

<sup>41</sup> As can be seen in fig. 17, which represents the frieze in the course of its restoration.

<sup>42</sup> Edition of E. Miller, I (Paris, 1855), pp. 115-116.

<sup>43</sup> The eastern jamb of an *arcosolium* which, if symmetry prevailed, must have been approximately 1.73 m. wide was found when the plaster was removed. The position of the niche, which reached the floor, is indicated by dotted lines on the plan, p. 215, and is such as to suggest a special place of honor, perhaps the resting place of Michael himself.

<sup>40</sup> Mr. Cyril Mango has called my attention to the fact that figures of early bishops of Jerusalem, Rome, and Constantinople also occur among the frescoes of the church of St. Sophia, Ochrid.

of the chapel where evidence of the existence of four arcosolia was discovered when the plaster was removed from the walls. The extent to which the narthex was altered in Turkish times can be grasped from a comparison of the plans of the structure as it now exists, published by A. Van Millingen,<sup>44</sup> with the sketch plan reproduced here (p. 215) in which the original arrangement of doors and niches (still somewhat conjectural) are reconstructed. There were at least four arcosolia in the narthex, two in the east wall flanking a relatively small door into the nave, one at the southern end (later made into a door), and another at the northern end of the west wall. In the Turkish alterations the two relatively narrow doors in the centers of the eastern and western walls were greatly enlarged and the arcosolia were filled with dressed stone and brick. Parts of the original arches of the niches and of the original entrance in the west wall are now visible and permit one to estimate the original spans of the niches and doors. Only in the north wall, which was so extensively altered, is it impossible at present to conjecture the original treatment. With the arcosolia and doors re-established, it becomes evident that there was a close relation between the wall treatments of the narthex and the "gallery" above, for in the latter one finds a similar arrangement of arcosolia in the eastern and western walls where three more tombs could be accommodated.<sup>45</sup>

When the plaster was removed from the west side of the western wall of the little narthex, the hacked remains of a cornice were discovered. This cornice was a continuation of that which runs along the southern façade of the chapel on which verses 10 to 22 of the epitaph of Manuel Philes had been carved.<sup>46</sup> It is probable, therefore, that the first nine verses had been carved on the cornice of the western side of the chapel which we found to have been chopped away. This discovery indicates that when the chapel was built its entire western façade stood free of the main

church, exposed to the exterior, and that the outer narthex of the main church and its two bays on the south side which now lead to the parecclesion, and cover most of its original façade, did not then exist.

#### *Mt. Sinai*

In the summer of 1958 the author was asked to visit the expedition, conducted by the Universities of Alexandria, Michigan, and Princeton, to the Monastery of St. Catherine on Mt. Sinai. The purpose was to study the mosaics in the church with the view to preparing a contribution to their publication. Scaffoldings were set up which permitted detailed photography and close inspection of all the mosaics. In the scene of Transfiguration which fills the conch of the apse an area of about one by two meters was found to have become detached from the masonry of the vault. Included in this area were the head and upper parts of the figure of Christ down to the knees, as well as most of the right side of the mandorla.

As most of this area was hanging in the nearly horizontal parts of the vault its prompt reattachment was urgently required. At the request of His Eminence Porphyrius III, Archbishop of Sinai, and with means provided by an anonymous contributor, the Byzantine Institute undertook the work in January 1959, and it was carried out by Mr. Carroll Wales and Mr. Constantine Causis of the Institute's staff in Istanbul. While the mosaic was in need of cleaning, only its reattachment was possible at the time. With the insertion of seven concealed copper cramps and of grouting through about fifty small openings made in the mosaic and later closed, the area in question has been secured.

*Paul A. Underwood*

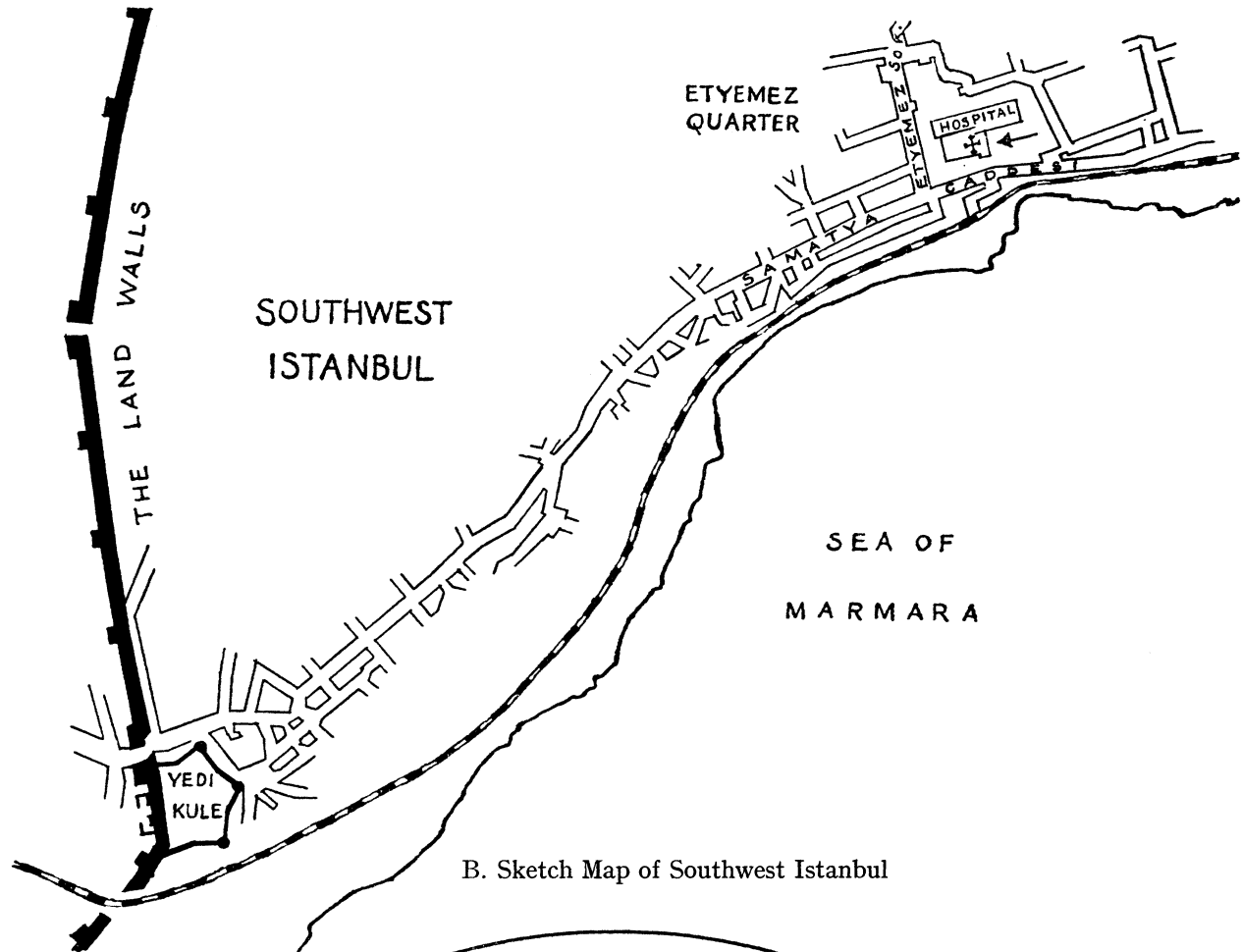
#### THE CONSERVATION OF A BYZANTINE FRESCO DISCOVERED AT ETYEMEZ, ISTANBUL

In October 1957 a Byzantine fresco of a Virgin and Child of the Blachernitissa type (figs. 22-25) was discovered in the Etyemez quarter of Istanbul in the course of excavations for the addition of a wing to the İşçi Sigorta Hastanesi (Labor Insurance Hospital) which is situated at the northeast corner of Samatya Caddesi and Etyemez Tekke

<sup>44</sup> *Byzantine Churches in Constantinople* (London, 1912), fig. 50 (facing p. 160).

<sup>45</sup> See the plan of Van Millingen, *loc. cit.*

<sup>46</sup> See the copy of the extant portions of the inscription in fig. 49 of Van Millingen, *op. cit.*, p. 157, and compare them with Philes' complete text which is on p. 158.



B. Sketch Map of Southwest Istanbul



C. Sketch showing three Layers of Fresco

Sokağı (text fig. B) about one and three quarters kilometers from the Golden Gate (Yedikule). The director of the Ayasofya Museum, Bay Feridun Dirimtekin,<sup>47</sup> was notified of the find and he in turn requested the staff of the Byzantine Institute to remove the painting and install it in the Ayasofya Museum since the structure in which it was found was to be razed.

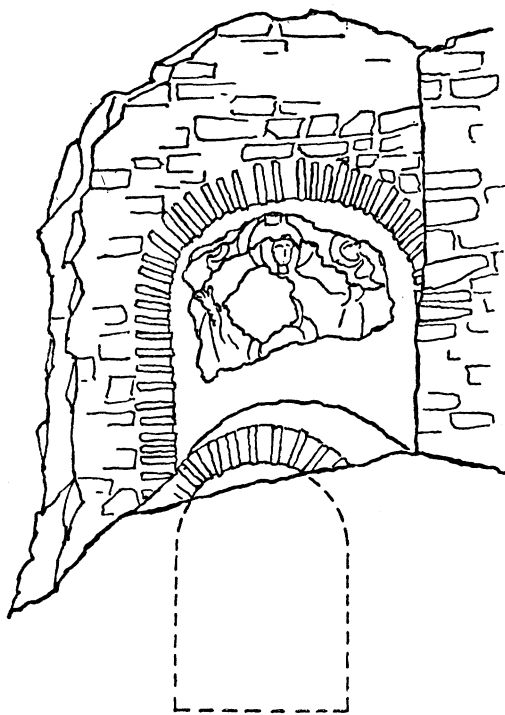
The painting was found in a small apse, the only part of the building that remained standing before the demolition work could be stopped. It was not possible under existing conditions to survey those structural remains that had not been completely removed. The conch of the apse, which contained the fragmentary fresco, measured 1.42 m. in diameter and .90 m. in depth, and its crown measured 1.40 m. above the extrados of a barrel vault which passed beneath the apse and extended for a distance of several meters behind it (see text fig. D). The vault had been used for burials.

Fragments of three superimposed layers of fresco were found in the conch (see text fig. C and fig. 18). The first, which is visible only at the upper left, appears to have consisted of geometric designs in a rather free style executed on a thin coating of plaster about 2 cm. thick. The intermediate painting, which was by far the best preserved, depicts the bust of a Virgin *orans* with the infant Christ enclosed within a circular mandorla on her breast (fig. 24). The center of the painting, including most of the figure of Christ, was destroyed through the use of heavy excavating equipment (fig. 18). The background of the painting was earth-red. At the left of the Virgin is part of an inscribed epithet (fig. 22); the area at the right, where the inscription must have continued, was covered by part of the third layer of fresco. On removing the covering plaster at this point, however, it was found that the inscription had already disappeared before the third painting had been executed. In so far as it is preserved, the inscription reads: Μ(ΗΤ)ΗΡ | [Θεοῦ] | υκατα...<sup>48</sup>

<sup>47</sup> See his report on the discovery of this fresco: "Fresco of the Virgin Discovered at Etyemez," *Türk Arkeoloji Dergisi*, VIII-2 (1958), pp. 42 ff.

<sup>48</sup> Since the letter *upsilon* is preceded by a well preserved area of background on which

The robes of the Virgin are dark blue and under the maphorion worn over the head a light blue head-cloth is visible at the sides of the face. The cuffs of her tunic are orange-gold. The large yellow ochre halo is bordered with dark purple and outlined in white. The



D. Sketch of Fresco in situ

surviving fragment of the robe of Christ is painted in yellow ochre with orange tones to give the effect of cloth of gold. The mandorla surrounding the Child is of three values of pale green; His halo is like that of the Mother. All flesh colors, which overlie a general tone of pale green, are of yellow ochre warmed with earth-red, highlighted with white, and

there was no trace of other letters, and no epithet of the Virgin could begin with the prefix *kata* preceded by an *upsilon*, one is compelled to believe that a curious mistake was made by the artist in using an *upsilon* for the feminine article *eta*. If one eliminates all epithets that are not feminine, those that make no sense, and all participles from the list of nineteen epithets prefixed by *kata* which were compiled by S. Eustratiades, 'Η Θεοτόκος ἐν τῇ ὑμνογραφίᾳ (Chennevières-sur-Marne, 1930), pp. 32 f., the epithet καταφυγή becomes the most likely way in which to complete the inscription.

shaded with umber. Middle tones in the flesh were left in the pale greens of the underpainting. Since much of the surface paint in the face is lost, the general appearance of all flesh tones is cool with areas of the green underpainting now exposed. On the basis of its style an eleventh-twelfth-century dating is suggested for the painting of the second period.

As can be seen in Text Figure C, the upper, or third, layer of fresco survived in a narrow strip high up in the conch. This painting consisted of a Virgin within a mandorla flanked by angels. It is probable that all three figures were full length and standing. In addition to being very fragmentary, this painting was in very poor state of preservation, especially on the left side. It was considered advisable, therefore, to remove all but the fragment of the angel at the right and thus to expose the upper parts of the better preserved painting of the second period. The robe of the Virgin of the third period was deep violet in color; her mandorla was pale green. The robes of the angels were blue and green; the background was blue-black. In style this third painting in the apse appeared to be of fourteenth-century date.

Construction work on the hospital made it imperative to remove the frescoes as quickly as possible, and a period of three days was granted for this purpose while demolition was halted. Detailed photographs were taken of the fresco in situ (fig. 18) and it was then treated and removed in accordance with the following procedure:

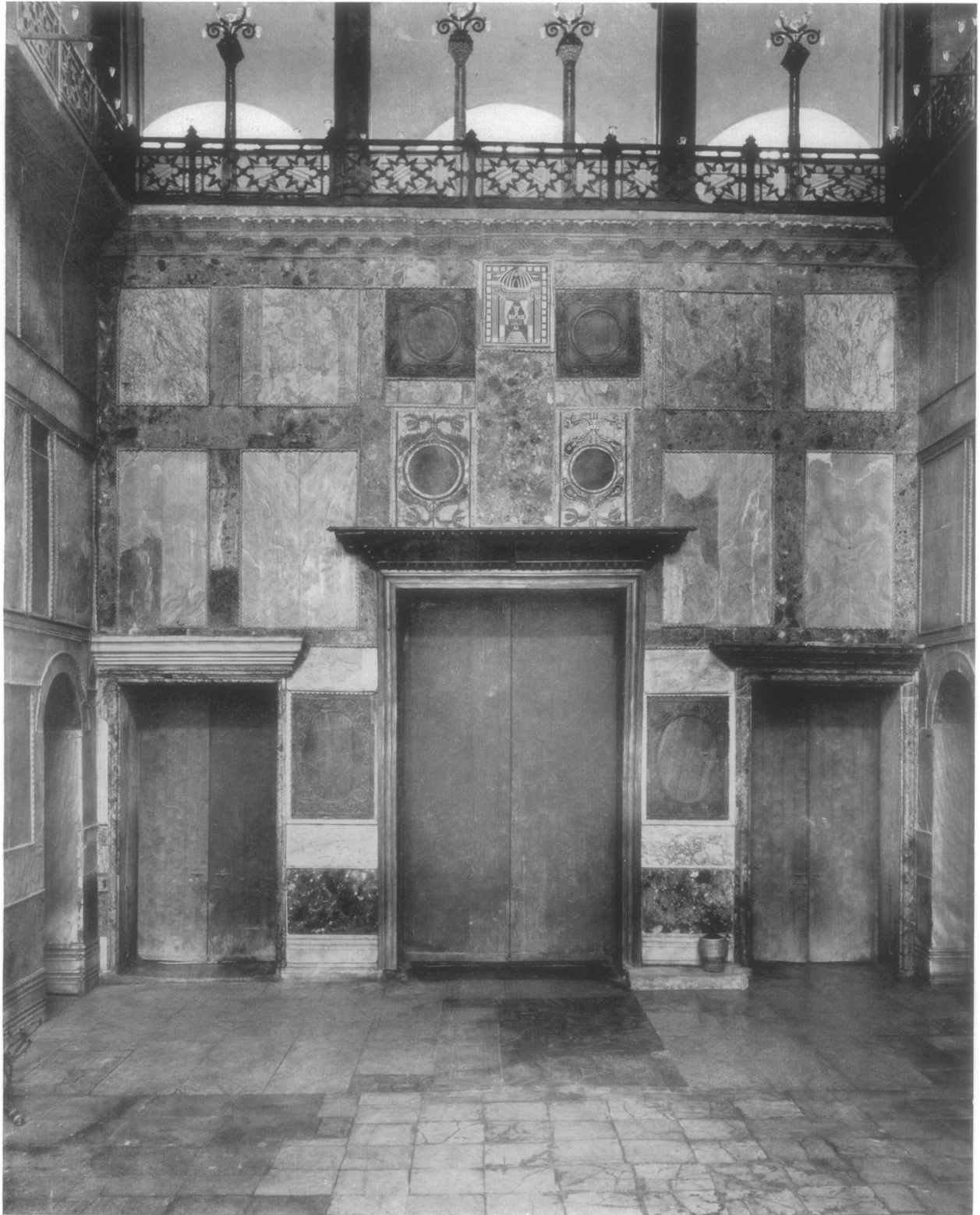
First, a superficial cleaning was carried out by manual removal, with the use of brushes and dental tools, of loose surface accretions. The surface was then given a brush coating of polyvinyl acetate in five per cent solution. A few deep cracks and holes were temporarily filled with plaster to provide a smoother surface for facing. A strong facing of Japanese mulberry paper was then applied to the surface using polyvinyl acetate as an adhesive (fig. 19). Three layers of heavy muslin over the layers of paper were applied with the same adhesive. While the facing was wet and somewhat transparent, division marks were made to indicate where the plaster would be cut into sections; the marks followed cracks in the

plaster or lines of division in the pictorial composition. After the facing was thoroughly dry, both the facing and the plaster, down to the masonry, were cut into twelve sections with razor blades, and joining marks were made on the facing to facilitate the reassembly of the pieces. The sections of fresco, with the plaster support, were then removed with the aid of spatulas, knives, and long thin chisels. The sections were now transferred to the workshop of the Byzantine Institute for reassembling.

The fresco was restored to its original shape by building a semidome support in the exact size and form of the surface of the conch from which it had been removed. The twelve sections were placed on this form (fig. 20) in accordance with the predetermined measurements taken in situ. All loose and desiccated plaster was removed from the back of each section of fresco and new lime plaster, with layers of plaster cloth worked into it, was applied to provide new support for the paintings and as a means of attaching one piece to another.

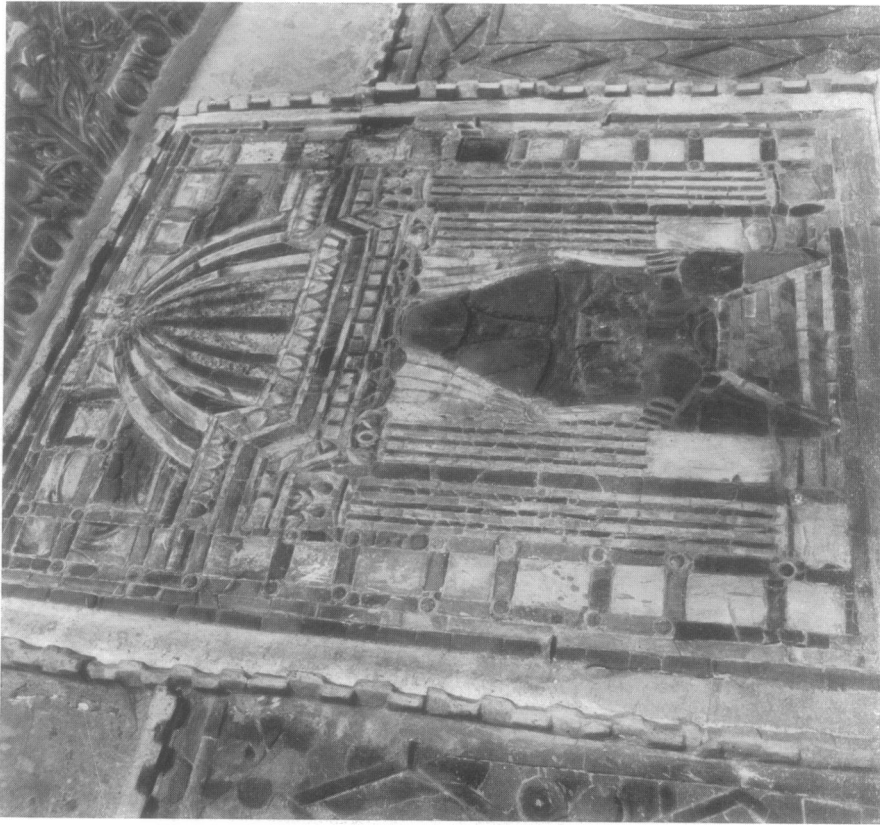
With the fresco thus assembled, a network of copper wire was attached to the new plaster backing through the use of plaster cloth. Free ends of the wire were then secured to a wooden armature (fig. 21) and a final coat of plaster and fabric was applied over the plaster backing and its armature to assure complete adhesion and rigidity. The interior semidome form could then be removed. The facing which covered the painted surface was detached by means of solvents, and the surface accretions were removed by the application of moisture and the use of brushes, orange sticks, and dental instruments. The portions of the third layer of painting at the left were removed to expose more completely the painting of the second period. As a result, the two hands of the Virgin, a large area of the red background, and the upper part of the Virgin's head were retrieved. Surface damages were filled with plaster and the missing parts of the painting were suggested by flat tones of color. Finally, the newly assembled fresco was transported to the Ayasofya Museum where it was installed in a small apse especially constructed for it.

*Lawrence J. Majewski*

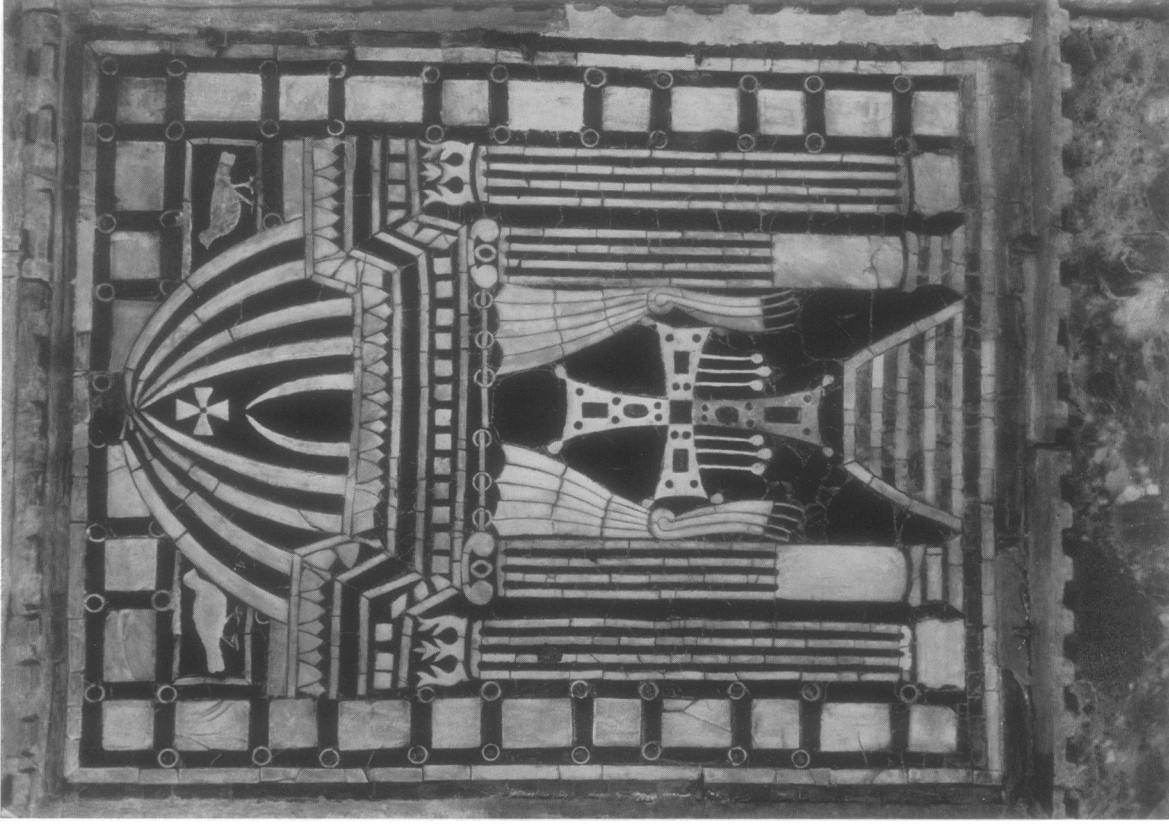


1. Hagia Sophia, West Wall of Nave





2. Before repairs

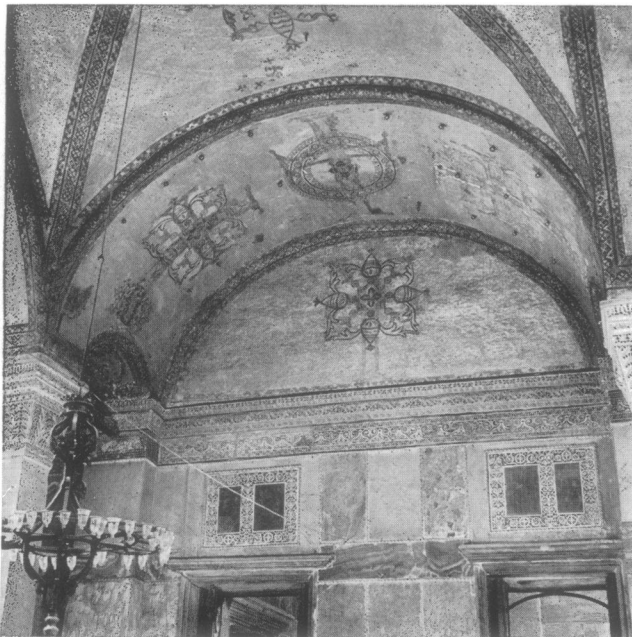


3. After repairs  
Hagia Sophia, West Wall of Nave. Opus Sectile Panel representing an Aedicula





4. West Wall of Nave. Opus Sectile Panels representing Dolphins



5. West Wall and Vaults of South Side-Aisle  
(before cleaning)

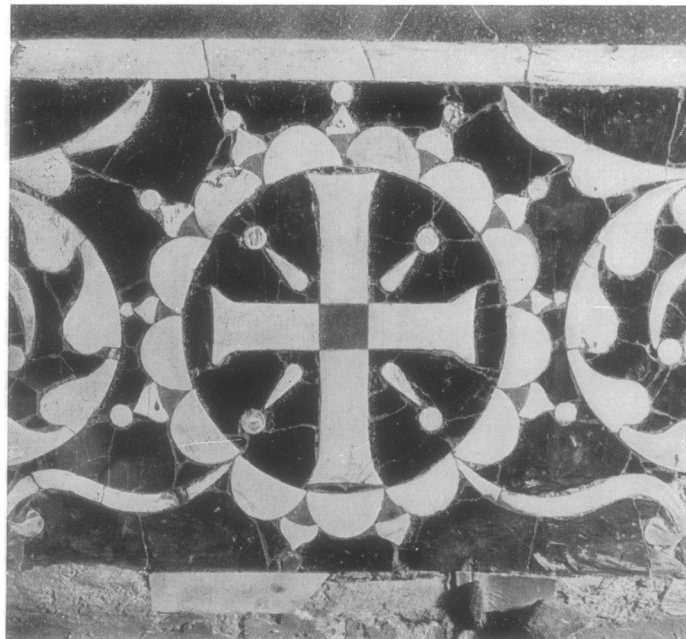


6. Mosaic Cross in Summit of Vault, West End  
of South Side-Aisle

Hagia Sophia.

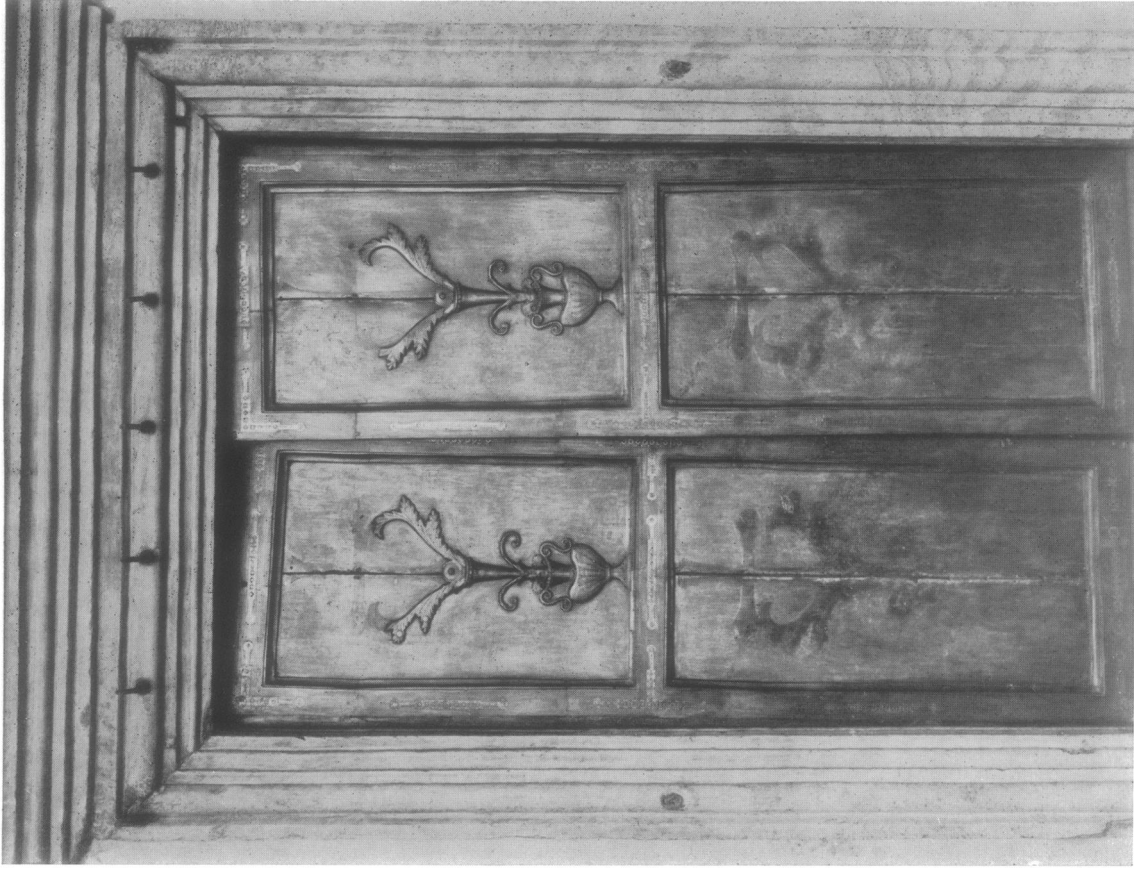


7. Opus Sectile Border in West Wall of South Side-Aisle, detail

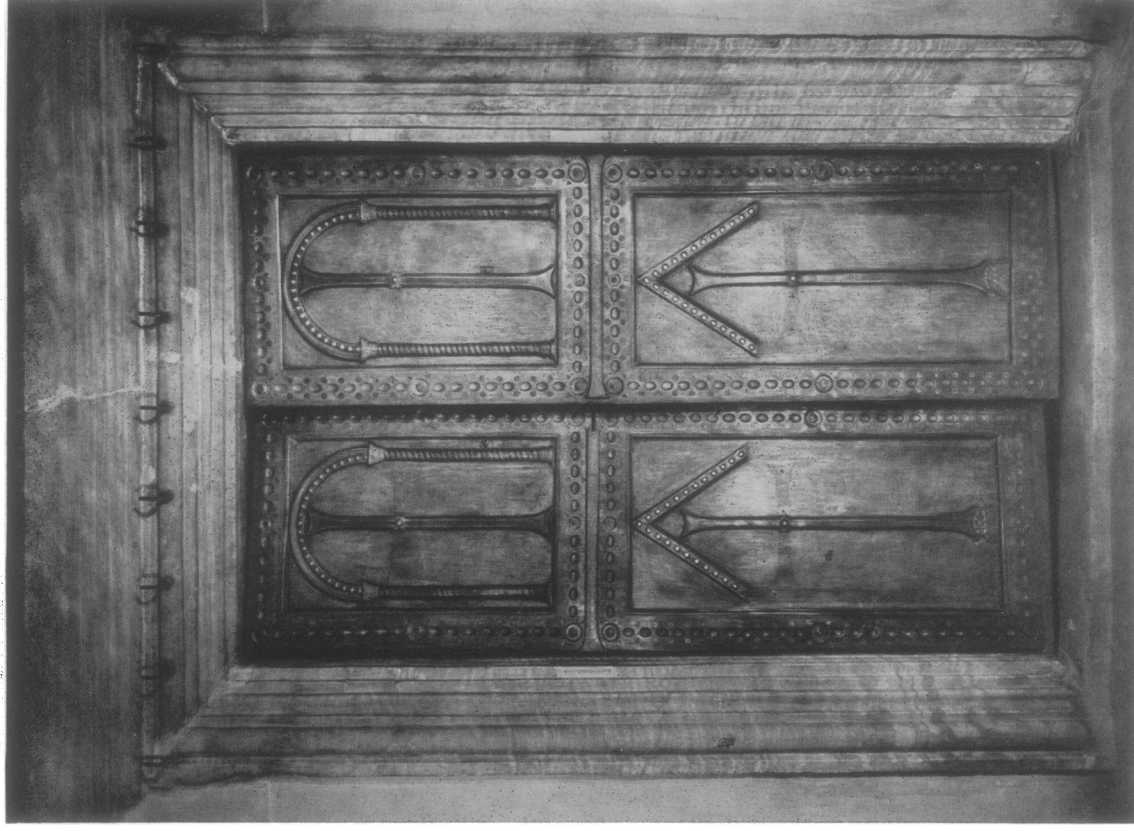


8. Opus Sectile Border in West Wall of South Side-Aisle, detail

Hagia Sophia.



9. Bronze Door to Inner Narthex, south of Central Door (after cleaning)



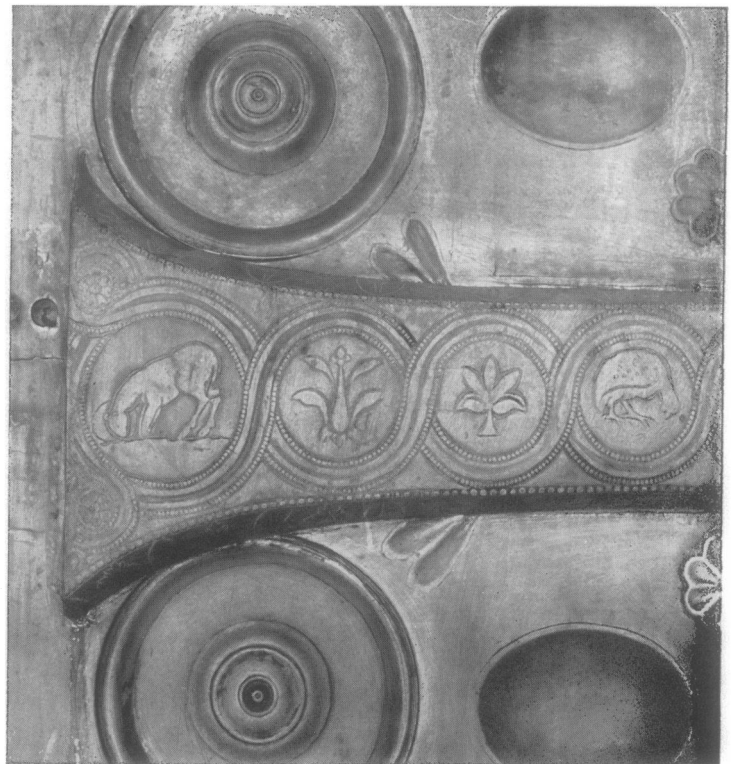
10. Bronze Door to Inner Narthex, Central Door (after cleaning)

Hagia Sophia.





11. Bronze Door to Inner Narthex, detail of Central Door



12. Bronze Door to Inner Narthex, detail of Central Door



13. Imperial Door, Bronze Lintel and Door Frame, detail (after cleaning)

Hagia Sophia.



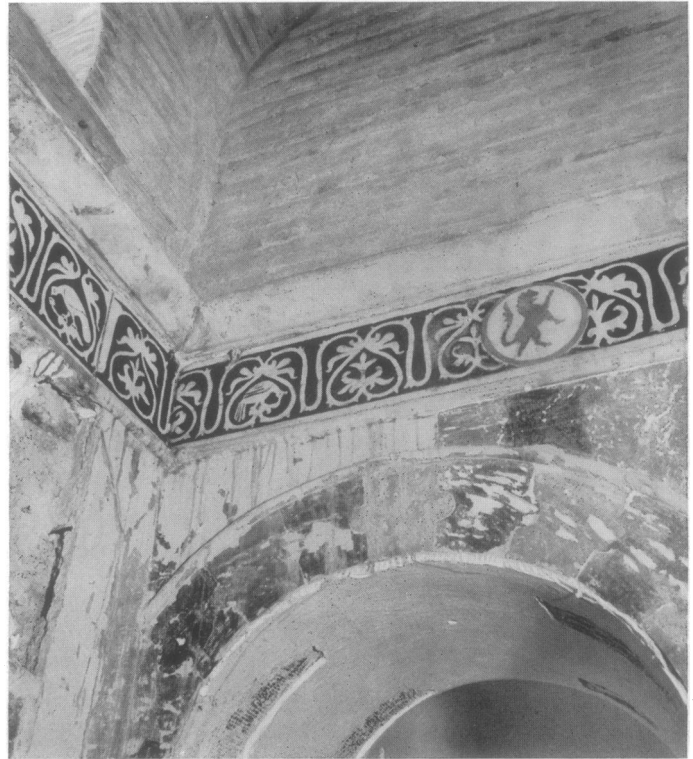
14. Hagia Sophia. Mosaic Portrait of the Emperor Alexander (partly uncovered)



15. Baptism of Christ, Mosaic (partly uncovered)



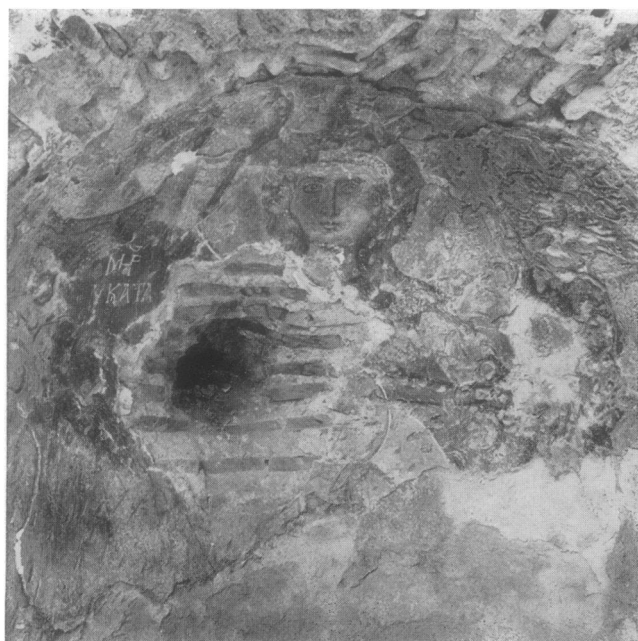
16. St. Blasius, Mosaic (partly uncovered)



17. Fragments of Cornice, Frieze and Revetments

Fetiye Camii.





18. Fresco in situ



19. Preparations for Removal of Fresco



20. Placing Sections of Fresco on temporary Form



21. The Fresco in its Armature

Removal of Etyemez Fresco



22. Detail of left Side



23. Detail of Right Side

Etyemez Fresco (restored)





24. The Virgin (Blachernitissa)



25. Detail: Head of the Virgin  
Etyemez Fresco (restored)